Corvallis Downtown

Parking Study

Phase 2: Parking Management Plan

Corvallis, Oregon

June 2002

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Corvallis, Oregon

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INTRODUCTION

The City of Corvallis' vision for the future includes a downtown that will be "the primary shopping area, community gathering place, and governmental hub. People will live, work, shop and play downtown making it a lively and inviting place." This vision includes redevelopment in the Riverfront area, a stable business core including specialty stores, restaurants and services, and a downtown that is safe day and night. The vision for the central city communicates that downtown will be accessible by all modes of transportation and there will be plenty of parking for those who drive to Downtown Corvallis.

The Phase I Parking Study concluded that the overall supply of parking is adequate to meet current and forecast demand. However, parking pressures exist for certain types of parking among particular user groups. For instance, in the retail core, customer parking within public facilities is effectively full during the weekday peak, while nearby private surface lots are generally underutilized. In addition, a considerable proportion of downtown employees reported "significant problems" with the current parking system, though the analysis of parking occupancy revealed high vacancy rates in long-term surface lots.

The relationship between parking management and alternative transportation modes was of critical interest in the development of this plan. Experience has shown that plentiful and low cost (or free to the individual) parking encourages single-occupant-vehicle (SOV) trips, undermining investments in alternative modes. A survey conducted in Downtown Corvallis in May 2000 revealed that the automobile is the primary mode of access to downtown. However, pedestrian and bicycle access is relatively (in comparison with other cities) high (15 and eight percent of total trips, respectively), indicating an environment that is conducive to non-motorized travel. Transit trips were relatively low, with a four-percent share of total trips.

Overall, this indicates a willingness to use alternate modes even without the incentive of scarce or expensive auto parking.

The Downtown Parking Commission determined that increased access to downtown by non-automobile modes would be necessary to help implement the vision for Downtown Corvallis. As such, the Commission established mode split targets for travel to and from Downtown Corvallis to be a achieved through integrated transportation and parking strategies. The mode split targets include a reduction in the auto mode from 72 to 62 percent, and offsetting increases in all other modes. The largest mode share increase is for transit, which is targeted to increase from the existing four percent to eleven percent. The Parking Commission established these targets as goals to be achieved within a ten- to twenty-year time frame.

The following plan outlines transportation system gaps or barriers that should be considered and evaluated as part of the transportation demand management (TDM) program developed and implemented in concert with the parking management plan. In tandem the parking plan and program support the desired development and transportation goals for Downtown Corvallis.

DEVELOPMENT OF THE PLAN

The Downtown Corvallis Parking Management Plan is presented in two sections. The transportation component presents topics and issues that should be considered in order to improve access to Downtown Corvallis by non-automobile modes. The second section outlines a series of specific auto parking management strategies. Together they are designed to help the City of Corvallis reach the target travel mode splits discussed in the Introduction.

The transportation component of this work is intended to help Corvallis staff identify system improvements thatcould be incorporated into their current plans and policies. As parking becomes more constrained, the multi-modal transportation system will need to be developed in a manner that provides viable options for traveling to Downtown Corvallis. The recommendations presented herein should be implemented over time and should be responsive to increasing demands for these facilities.

The parking management strategies presented are intended for adoption by the City of Corvallis and immediate implementation. The transportation mode split goals for Downtown Corvallis will take time to achieve and will require implementation of strategies contained in the Corvallis Transportation Alternatives Analysis. Adopting the parking management strategies will provide City staff with the tools necessary to appropriately manage the Downtown Corvallis parking supply.

The transportation component and parking management strategies were developed and coordinated through the following steps:

1. Identify the critical parking issues through sound data analysis (i.e., inventory capacity/utilization) and public involvement.

2. Develop and adopt overall Guiding Principles for the downtown.

3. Evaluate multi-modal access to downtown under the existing system, and identify gaps and measures to achieve desired mode share goals.

4. Determine discrete “parking management zones” based on existing and desired future parking conditions, land uses, and access needs.

5. Using the Guiding Principles, develop operating principles for each parking management zone that support the priorities for those zones.

6. Develop parking management strategies that meet the overall Guiding Principles for downtown, support the priority operating principles for each district, and address existing parking issues.

7. Formulate the parking strategies into a comprehensive plan for near-, mid- and long-term implementation.

KEY ISSUES

Phase 1 of the Corvallis Downtown Parking Study provided the City, the Parking Commission, and the Consultant team with a comprehensive understanding of the current parking system and future needs for Downtown Corvallis. Concerns among the general public were garnered through the intercept surveys and the public involvement process. that have been used throughout this process. Based on the findings of the data collection and analysis, as well as on concerns expressed by the general public and by commission members and other stakeholders, several key issues were identified that shaped the development of this parking management plan. The following items summarize the key issues and concerns.

- The existing auto parking supply is currently underutilized during peak days and seasons.
- Some areas of downtown are heavily parked; in particular, on-street and short-term (parking less than four hours) locations in the core are effectively full during the peak. There are also constraints for long-term (parking for more than four hours) parking near the civic neighborhood as noted in the Phase 1 Parking Study.
- Anticipated riverfront development will increase parking needs while redevelopment of the riverfront area will result in the loss of some existing supply.
- There is a need to balance the conflicting needs for short-term, customer parking and long -term employee parking in a manner that continues to support downtown vitality.
- Several off-street facilities in and out of the core area (particularly the private lots) are underutilized.
- Pricing of public parking can have negative effects on customer attitudes and perceptions of downtown.
- The Parking Commission is committed to achieving a balanced transportation system, including increased access via walking, bicycling, and transit, and reduced reliance on automobiles.

The issues outlined above are not intended to represent all concerns about parking that have been expressed in public meetings and previous studies. Rather, they are intended to serve as broad parking themes that appear to have been consistently expressed in various forums and studies. The parking management plan attempts to provide a framework through which each of these issues could be reasonably addressed.

GUIDING PRINCIPLES

The following Guiding Principles were developed based on the Consultant Team's understanding of the fundamental values and objectives for Downtown Corvallis, in light of the opportunities and challenges identified in Phase 1 of the Parking Study. These principles also reflect the suggestions and comments provided by City Staff and members of the Parking Commission.

1. The City should strive to create and implement as many access options as possible and provide a *balanced* access system that includes transit, automobile, bicycle, and pedestrian facilities and services, for all users of the downtown.

2. Auto parking management strategies and programs should support and complement all access modes.

3. Sufficient auto and bicycle parking (using the 85-percent-full standard) should be provided to support desired economic activities in Downtown Corvallis.

4. The most convenient parking spaces should be reserved to support customer/client/vendor/visitor access to downtown. Management of the on-street parking system should promote customer/visitor accessibility.

5. Sufficient auto and bicycle parking (using the 85-percent-full standard) should be provided to meet employee demand, in conjunction with an access system that provides balanced travel mode options. All parking strategies should be coordinated with transportation demand management goals and objectives to ensure that employees and customers have reasonable options available for access.

6. The City should consider transitioning existing private parking lots to multiple uses through shared parking agreements and other effective mechanisms to maximize utilization. Future off-street parking facilities should be managed to serve multiple uses and to achieve optimum utilization.

7. The City's public information system should provide a clear and consistent message about car parking and access to and within downtown in order to optimize utility and convenience for all users.

8. The City should encourage and support growth in residential uses in the downtown as an effective transportation demand management strategy. In this regard, the City should develop parking and transportation option programs that support the unique role of downtown residential development in economic vitality.

9. The downtown parking auto and bicycle supply should be managed to minimize customer/client/visitor and employee parking impacts to adjacent residential neighborhoods.

10. The auto and bicycle parking supply should be managed to support the adopted plans for Downtown Corvallis.

11. The City monitor downtown access modal splits and actively manage programs toward meeting the modal split goals.

MULTI-MODAL ACCESS

A review of the existing transportation infrastructure and services was conducted to identify existing strengths, barriers, and gaps in the system. As noted previously, the current underutilized auto parking supply reduces some incentives for the use of alternative modes. However, ~~minor~~ improvements can be made to help people use alternative modes in order to achieve the targeted mode splits.

Based on the Market/User Preference Survey completed in Phase 1 of this study, the existing non-auto mode split in Downtown Corvallis is 28%; higher than most towns of similar size. The 2020 Vision for Downtown Corvallis is to provide equal access to downtown for all transportation modes. The Parking Commission has targeted a non-auto mode split of 48% as an ultimate goal for downtown; however, an interim goal has been identified as 38%. The existing and target non-auto mode splits for Downtown Corvallis are summarized in Table 1.

Table 1
Existing and Target Non-Auto Mode Splits

Mode Split	Transit Mode	Bike Mode	Walk Mode
Existing	4%	8%	15%
Interim Goal	11%	10%	17%
Long-Range Goal	16%	14%	18%

As Table 1 shows, the transit mode share to downtown is currently four percent. However, the Parking Commission has established ambitious goals for increasing transit trips, with interim and long-range mode split goals of 11% and 16% respectively. Bicycle trips make up eight percent of all existing trips to Downtown Corvallis. The bicycle mode split goals are to achieve 10 percent and 14 percent bicycle mode shares for the interim and long-range horizons. Walk trips make up 15 percent of all existing trips to Downtown Corvallis. Because the existing mode share for walking is very strong, the targeted increases for interim and long-range timeframes reflect marginal increases of 18 percent.

As the total number of trips to downtown increases, the number of non-auto trips would have to increase simply to maintain the existing distribution of travel modes. The target mode splits will require that non-auto trips increase in higher proportion than overall trips to downtown. For example, based on the 10-year growth scenario, walking trips to downtown may need to increase approximately 23% to meet the 17% mode split goal. Based on the 10-year growth scenario, biking trips to downtown may need to increase approximately 45% to meet the 10% mode split goal. Based on the 10-year growth scenario, transit trips to downtown may need to triple to meet the 11% goal. These are ambitious targets.

Following is a summary of the multi-modal transportation improvements that can be implemented to help Corvallis move toward the mode split goals.

TRANSIT MODE

Public transit to Downtown Corvallis is provided by the Corvallis Transit System (CTS) and the Linn-Benton Loop System. CTS provides local service, with connections to activity centers within the City. The Linn-Benton Loop System connects Linn-Benton Community College to Corvallis and Albany and stops at the Downtown Transfer Point on 5th Street and Jefferson Avenue. Figure 1 shows the existing transit service in downtown, as well as the current and planned downtown transfer center.

CTS operates six fixed-route bus lines (Route 1-6), two service routes (A and B), which provide wheelchair service, and a Corvallis/Philomath Connection Route. Service on all routes starts between 6:25 a.m. and 7:15 a.m. and the last runs leave the downtown transfer point between 6 p.m. and 7 p.m. depending on the route number. Route 5 (Kings Boulevard) operates on half-hour headways and provides service to the Downtown Transfer Point. All other routes operate with one-hour headways and provide service to the Downtown Transfer Point at 5th Street and Jefferson Avenue. Route 1 (Witham Hill) has one additional a.m. peak hour service (providing 30-minute headways during one hour) and South Corvallis (Route 6) has 30-minute headways for two hours during the a.m. peak period. All routes operate on Saturdays except the Corvallis/Philomath Connection Route. The hours of service on Saturdays are roughly 10 a.m. to 4 p.m. and there is no service on Sundays.

The Linn-Benton Loop System stop in Albany is a transfer point for other Albany Transit buses. Service at the Downtown Transfer Point is provided with approximately one-hour headways from 7:05 a.m. to 7:15 p.m.

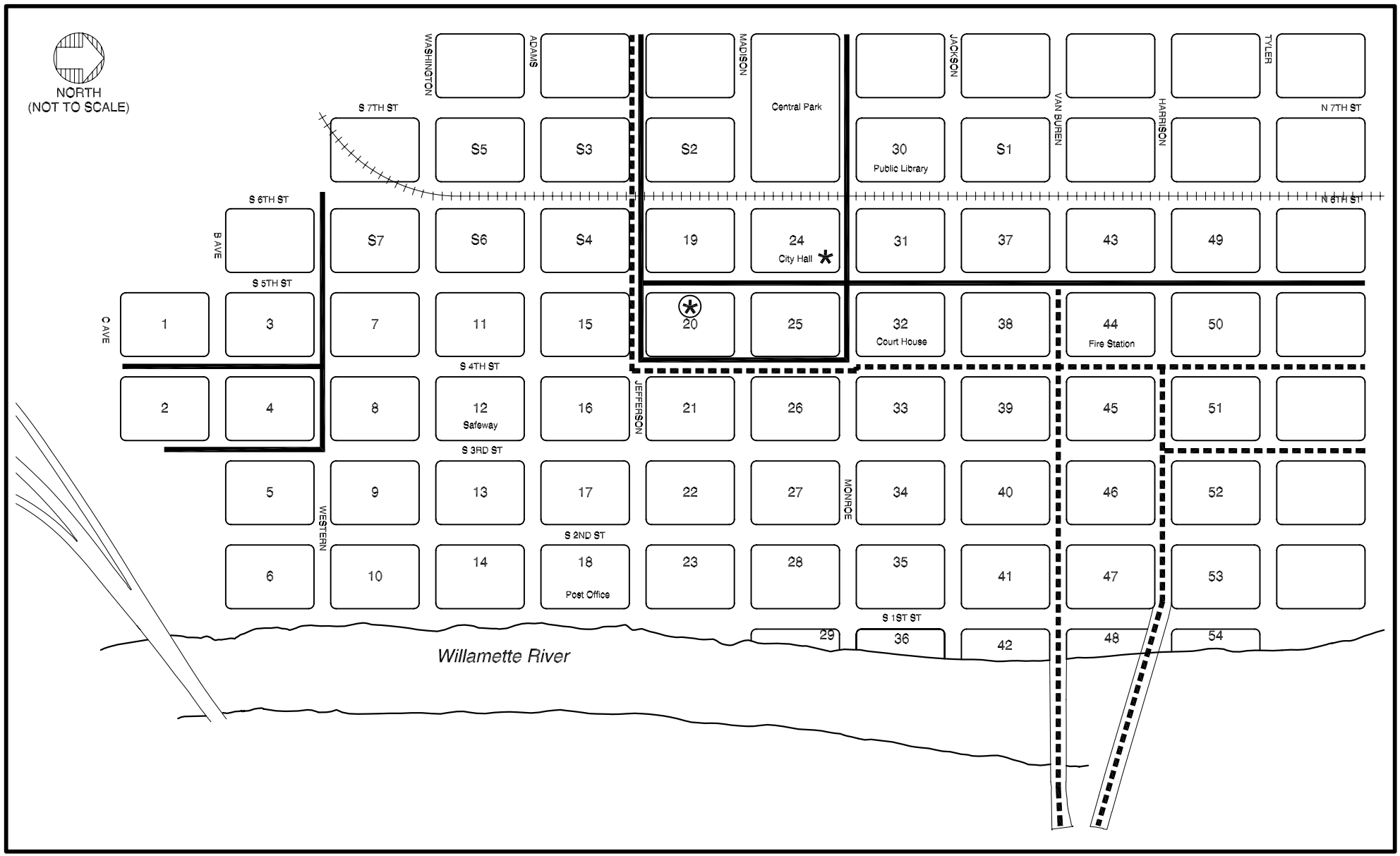
Transit Fares

The cash fare for CTS is $0.50 for adults, $0.25 for seniors, disabled, and youth, and free for children 5 years and under. Twenty-ride booklets of tickets, monthly, 6-month, and yearly passes are available at progressively discounted rates. An adult yearly pass is $65 and $46 for seniors, disabled, and youths. Oregon State University students and faculty obtain passes through their student enrollment fees. The fare for the Linn-Benton Loop System is $0.85 for cash, with a slight reduction for a twenty-ride pass.

Improvement Alternatives

As shown in Table 1, the Parking Commission has established its most ambitious mode share increase for transit use, from the existing four percent, to 11 percent and 16 percent as interim and long-range goals. However, under the current parking conditions, major investments in transit infrastructure are not recommended. Experience has shown that when parking is readily available and relatively inexpensive, as in Corvallis, some incentives to use transit are reduced. However, incremental improvements should be implemented in a parallel effort with the parking management measures. As parking becomes more constrained, especially for employees, transit will become a more inviting alternative for access to Downtown Corvallis.

Several options have been identified to increase the transit mode split. Each of these measures is described in the following paragraphs, along with a preliminary assessment of implementation issues and associated costs. The transit service alternatives focused on the Corvallis Transit System service, since it is under management of the City of Corvallis.



LEGEND

- Corvallis Transit Routes
- Linn-Benton Loop System Routes
- # Study Area Block ID
- Proposed Future Transit Center
- Current Transit Center

DOWNTOWN TRANSIT SERVICE

DOWNTOWN PARKING PLAN CORVALLIS, OREGON SEPTEMBER 2001	FIGURE 1

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Improved Downtown Circulation

The possibility of circulating downtown routes on more downtown streets was evaluated. Most of the current CTS bus routes only run along 4th and 5th Streets between Jefferson Avenue and Monroe Avenue and along Jefferson Avenue and Monroe Avenue west of 4th Street. Discussions with City staff and a review of the current transit schedules revealed that within the current routing the additional travel time necessary to increase circulation on downtown streets could not be accommodated without either increasing headways or cutting other parts of the transit system. This would result in negative impacts to the continuity of scheduling and service availability on the system. Opportunities for extending routes to other areas of downtown should be examined for practicality, when route revisions take place

Most downtown locations are currently within four or five blocks of transit service, which is generally considered a reasonable walking distance to transit service, but is greater than the preferred walking distance to auto parking as reported by downtown customers and employees. The benefits for downtown of making circulation changes would be linked to reducing the distance to transit stops to the preferred level reported by downtown users, and should be compared to cost-effectiveness of other strategies.

Increased Service Frequency and Extended Service Hours

Increasing bus service either by reducing headways or adding service hours would improve service and would support future increases in transit ridership. The following costs were obtained from City of Corvallis staff based on recent service changes:

- Doubling bus frequency on one route for an entire day costs approximately $150,000 per year plus the cost of the bus during the first year (approximately $260,000).

- Employing a single bus (already owned by the City) for one and half hours to increase a.m. peak hour frequency on two routes (Route 1 and Route 6) increased operating costs by approximately $20,000 annually.

- Extending the service hours on all routes by one hour (either in the evening or in the morning) would cost approximately $100,000 annually.

The current transit service runs between 6:30 a.m. and 7:15 p.m., which covers the peak periods for downtown employee arrivals and departures. Therefore, the impacts on commuter trips from extended hours of service would likely be limited.

Increasing service frequency is likely to have a more substantial impact.

Transit Stop Amenities

Covered bus shelters, benches at bus stops, and other service amenities would improve the level of comfort for transit service. Improvements in bicycle facilities for transit riders would improve opportunities for bicycle commuters.

Shuttle Service

Shuttle service in conjunction with satellite parking facilities has been used by some jurisdictions in order to shift parking demand outside of congested areas. Three type of shuttle service were

considered for Downtown Corvallis.

Commuter Shuttle: The available capacity in public long-term lots and in uncontrolled on-street parking outside of the core is too high to make a commuter shuttle system feasible for existing conditions.

Special Event Shuttle: Shuttle services are an effective means of accommodating seasonal peaks and special event parking demand. Corvallis Transit Service operates a Trolley shuttle during special events such as Da Vinci Days, and during the Winter Holiday shopping season.

Shared Parking/Shuttle Program: A shuttle service may be effective in combination with shared parking agreements, particularly at those facilities providing long-term parking for commuters. This is discussed in more detail in the parking management section on shared parking.

BICYCLE MODE

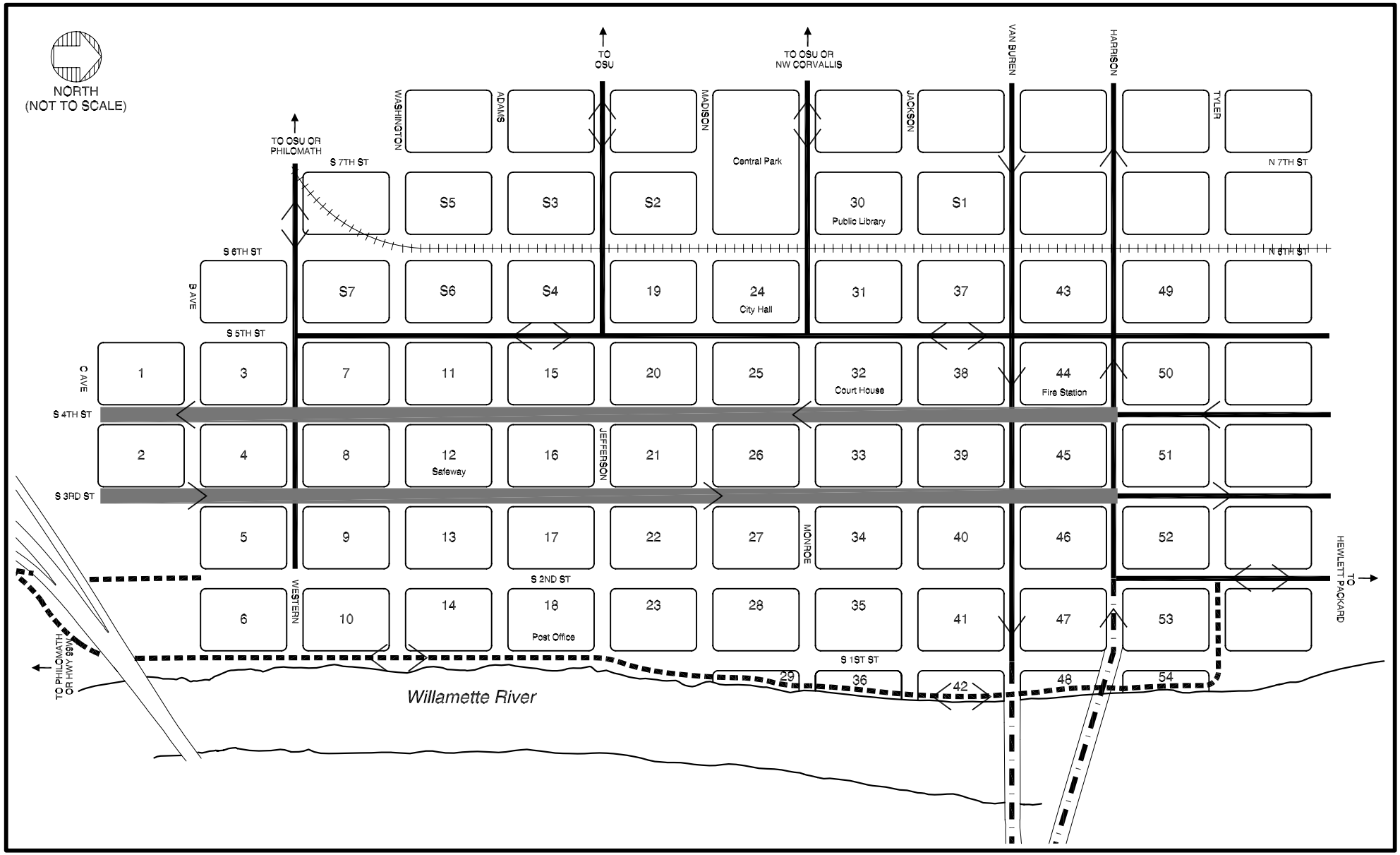
Figure 2 shows the existing network of bicycle lanes in downtown. As shown, designated bicycle lanes on several streets provide access to downtown. East/west bike lanes are provided on Monroe Avenue, Jefferson Avenue, Western Boulevard, Harrison Boulevard (westbound), and Van Buren Avenue (eastbound) to 5th Street. North/south bike lanes are provided along 5th Street from Western Boulevard north through Downtown, and a multi-purpose path is provided on the east side of 1st Street along the riverfront.

The *Corvallis Area Bikeways* publication by the City of Corvallis identifies 3rd and 4th Streets as "caution areas" due to a "combination of narrow road width, no bike lanes, high traffic volumes and poor sight distance."

The City provided the existing inventory of bicycle parking in the downtown. Currently there are approximately 515 bicycle parking spaces, of which 24 are covered, throughout the downtown area. The inventory did not examine use patterns to evaluate any significant gaps in bicycle parking within the downtown street system. The approved *Land Development Code* (4.1.30.b and 4.1.c) requires that most developments downtown provide one bicycle parking space for every 10 required motor vehicle parking spaces and that the proportion of covered spaces should be consistent with the proportion of covered automobile spaces. Based on this standard, downtown Corvallis has an adequate supply of bicycle parking spaces, but an under supply of covered spaces.

Improvement Alternatives

The City and the Parking Commission identified targets for bicycle mode share of 10 percent (interim) and 14 percent (long-range), compared to the existing mode share of eight percent. As shown in Figure 2, designated bicycle lanes are provided on several streets accessing downtown. However, there are no dedicated bicycle lanes within downtown core area.



LEGEND

- Bike Lane
- Shoulder Bikeways
- Caution Areas
- Multi-Use Path
- # Study Area Block ID

DOWNTOWN BIKEWAYS

DOWNTOWN PARKING PLAN CORVALLIS, OREGON SEPTEMBER 2001	FIGURE 2

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Extension of Monroe Avenue Bicycle Lanes

The City requested an assessment of a proposal to provide additional east/west bicycle lanes into downtown east of 5th Street. In particular, the Bicycle and Pedestrian Advisory Committee has proposed the extension of bike lanes on Monroe Avenue from 5th Street to 1st Street. The impacts of this proposed change are evaluated below.

Two-way bicycle lanes on Monroe Avenue terminate at 5th Street. North/south two-way bicycle lanes are also provided on 5th Street. The proposed change would extend the two-way bicycle lanes between 5th Street and 1st Street on Monroe Avenue, creating a designated connection in the bicycle network through downtown between 5th Street and along the riverfront. Existing bike lanes on Monroe connect with highly traveled bike routes on Kings Blvd and 29th Street, as well as abutting the OSU campus. Existing bike lanes on 5th Street connect with 9th Street and the Buchanan/Circle multi-use path.

To create the connection, Monroe Avenue would have to be converted to a two-way street east of 5th Street. This would disrupt the east/west one-way grid pattern in downtown. Identifying the precise implications on vehicular travel would require a specific vehicle circulation analysis. However, the proposed change would require modification of traffic signals along Monroe Avenue, and perhaps on some north/south roadways as well. Impacts to traffic operations on 3rd and 4th Streets would require review by Oregon Department of Transportation officials.

Vehicle Parking Spaces

Creating the two-way bike lanes and two-way traffic flow would also require converting the existing angled parking to parallel parking. Approximately 30 vehicle parking spaces would be lost in this conversion. If the bike lanes extend only from 5th to 3rd Streets, the limit of collector designation, the loss of parking would be 21 spaces. The utilization study showed that most of on-street parking along Monroe Avenue between 5th and 1st Streets is high, typically over 85 percent. Further, the majority of on-street parking on Monroe Avenue serves short-term users, including a significant number of free customer spaces.

The removal of 30 parking spaces would cause existing utilization levels on Monroe Avenue and adjacent streets (most of which are currently at or above the 85% utilization level) to increase. Without taking action to relocate the short-term parking eliminated with this option, removing these parking spaces would be inconsistent with some of the priorities established in the Guiding Principles. As such, removal of on-street parking on Monroe Avenue would trigger the need for implementing additional parking management options. These could include identifying existing private off-street parking available for lease to the City, or developing additional on-street or public off-street parking in the immediate area.

System-wide Bicycle Improvements

The proposed change would provide a new designated east/west link across downtown and a specific link to the multi-use pathway along the Riverfront and locations outside of downtown. However, for commuting cyclists there are currently no significant barriers to this connection, given the level of access available on Monroe Avenue between 5th and 1st Street. For commuters and inexperience riders, the proposed change would constitute an *improvement* in conditions for bicycle access, but would *not reflect additional* bicycle access. Bike lanes can give a much greater sense of security, and could increase the feeling of safety riding to downtown destinations.

Downtown Bicycle Access
With the proposed bike lanes on Monroe Avenue, improvement in bicycle access within downtown would be greatest for destinations on Monroe Avenue, and the north/south streets near Monroe. Other destinations would continue to require bicyclers to go off of the designated bicycle lanes and travel with vehicle traffic.

Implementation Costs
City of Corvallis staff estimate that this project would cost approximately $150,000 for implementation, including engineering, signal modifications, and pavement re-striping.

Alternative One-way Bike Lane Couplet

As an alternative to the two-way bike lanes proposed on Monroe Avenue, the possibility of providing a one-way bicycle lane couplet on Monroe Avenue and a westbound street was evaluated. Madison and Jackson Avenues were considered as potential routes.

This arrangement would maintain the existing one-way circulation pattern in the downtown. Westbound bicycles lanes on Madison or Jackson Avenue would terminate at 5th Street, so bicyclists would have to divert to either Jefferson Avenue or Monroe Avenue in order to continue westbound on designated bicycle lanes.

Vehicle Parking Spaces
Approximately 30 vehicle parking spaces would be lost due to converting one lane of parking from angled to parallel on each street. Most on-street spaces on Madison and Jackson Avenues are designated for short-term use. The utilization study showed that utilization is very high on both streets during the peak hour, typically above the 85 percent full threshold. Therefore, removal of 30 spaces would likely displace existing parkers and be inconsistent with the priorities established for parking on this street. Similar to the "bike lanes on Monroe Avenue" proposal, parking management actions would be required to accommodate this change.

System-wide Bicycle Improvement
Similar to the Monroe Avenue extension, the proposed change would provide a new designated east/west link across downtown, though this option would require a slight "jog" rather than providing a continuous connection along Monroe Avenue. There are currently no significant barriers to this connection, since bicycles are able to travel between 5th Street and 1st Street within vehicle lanes. Therefore, the proposed change would constitute an *improvement* in conditions for bicycle access, but would *not reflect additional* bicycle access. The increased security of bike lanes could improve the feeling of safety riding through downtown.

Downtown Bicycle Access
Under this option, access within downtown would be marginally better than existing conditions or the two-way bike lane extension on Monroe Avenue. The improved access would result in more street frontage served by designated bicycle lanes. Improvement would be greatest for destinations on Monroe, Jackson, or Madison Avenues or nearby north/south streets.

Implementation Costs
City of Corvallis staff estimate that this project would cost approximately $5,000 for pavement striping removal and re-striping.

Viability of Bicycle Improvement Evaluation Model

Members of the Corvallis community requested that the impacts of the proposed extension of bicycle lanes on Monroe Avenue be evaluated using transportation models specific to bicycle facilities. In order to explore this request, the consultant team contacted the developer of a leading model of this type to assess the viability of modeling the proposed change. According to the developer of the Sprinkle Model, current available models assess *quality of bicycling conditions* and not changes in *bicycling demand*. The cost of assessing the change in quality of bicycling conditions for a change of the magnitude proposed on Monroe Avenue would be on the order of $10,000 to $15,000. The model would not determine impacts in terms of changing mode shares or total bicycle trips. According to the developer, a model could be created that would measure the change in bicycle trips from such a project. However, the forecast change bicycle trips could not be provided with sufficient confidence, given the significant assumptions, judgment, and model calibration that would be required. This is especially true given that the project in question improves an existing connection, rather than removes a barrier to bicycle access. Finally, the extensive data collection and model development would be costly, probably approaching $100,000 for the project in question.

Improved Bicycle Facilities

Another means of improving bicycle access to downtown is providing additional bicycle facilities to improve safety, security, and comfort for bicyclists. Adequate bicycle racks, bicycle lockers, changing rooms, and/or shower facilities enhance conditions for bicycle commuters.

A means of achieving this would be developing a Bicycle Center in conjunction with developing the proposed Transit Center at 5th Street and Monroe Avenue. Located at the juncture of existing bicycle lanes in downtown, the resulting facility could operate as a multi-modal transfer center. The improved bicycle facilities would provide improved bicycle amenities and provide a significant improvement for bicycle/transit/automobile connections.

Implementation Costs of Bicycle Racks

Based on conversations with City of Corvallis Staff, bicycle racks for ten bicycles cost approximately $1,000, and covered parking facilities for ten bicycles have ranged in price from $15,000 to $40,000 in Corvallis. Downtown Corvallis does not currently have any bicycle lockers. However, private vendors provide bicycle lockers for $600 to $800 per stall.

Bicycle Awareness/Education Activities

Information and education programs are another effective way to improve conditions for bicycling and increase the overall awareness and visibility of bicycling in downtown Corvallis. For example, some communities have developed safety brochures, or offered classes on helmet fitting and bicycle safety. Several resources are available to help develop bicycle safety programs. The Centers for Disease Control (CDC) coordinates a National Bicycle Safety Network (http://www.cdc.gov/ncipc/bike/index.htm) that provides information exchange for bicycle safety programs and resources.

WALK MODE

The existing environment in downtown is, for the most part, very pedestrian friendly. All streets within the study area have sidewalks. Pedestrian crosswalk markings are provided across all of the side street approaches to through streets and across all approaches at signalized intersections. All

traffic signals have protection for pedestrians and many have audible crossing signals. Some newly redeveloped areas such as City Hall have curb extensions to narrow the pedestrian crossing distance and provide more sidewalk space and most blocks have street trees on all sides.

The pedestrian environment to access downtown is as important as the environment once pedestrians arrive downtown. The pedestrian environment is very friendly surrounding and leading to downtown as well. Most streets in the areas to the north, west, and south of downtown have sidewalks with landscaped parkways between the street and the sidewalk. A major exception is South 3rd Street , south of the Mary's River, which has street side sidewalks abutting a 5-lane arterial highway.

Improvement Alternatives

One way to increase the number of walking trips to downtown is to increase residential housing in the immediate and surrounding area. The significance of this strategy cannot be overstated. Downtown housing produces more walking trips than any other residential type. Downtown housing generates more street-level activity during evenings and weekends, thus enlivening the area. Finally, downtown housing can intensify the use of land, improve the economic vitality of the area, and enhance the attractiveness of downtown. The City's proposed Riverfront Plan has been developed to provide more housing in the Downtown Core and enhance the pedestrian environment.

While residential development can increase the overall share of walking trips in downtown, parking conflicts can also arise from the presence of residential properties in urban locations. Where existing residential uses rely on on-street parking, the City may want to consider permit programs exempting residents from fees and time stay restrictions at metered on-street spaces. As new residential development occurs, the current development code requirements can be used to ensure adequate off-street parking for new residents. Any future revisions to the code should consider the unique character and needs of residential developments in downtown areas.

Additionally, pedestrian activity is supported by enhancements to the pedestrian environment such as awnings, street furniture and, curb extensions as well as sidewalk dining and ground floor retail in multi-level structures.

PARKING MANAGEMENT

The purpose of the parking management plan is to clearly define the intended use and purpose of the auto parking system, manage the supply and enforce the parking policies, monitor the use and respond to changes in demand, and maintain the intended function of the parking system. Throughout the plan, distinctions are made between short-term (customer, vendor, and other visitor) and long-term (employee) parking management measures in order to reflect the priorities and objectives identified in the Guiding Principles.

PARKING MANAGEMENT ZONES

Different segments of the downtown have different economic uses and represent different points of access into the downtown. The heart of downtown should represent the area in which the highest density of economic activity and access is intended to occur. Parking should be seen as a management tool that supports specific economic uses. The desired economic activity in a particular area of downtown should drive the decision making for the type of parking required. Figure 3 shows three recommended parking zones for Downtown Corvallis. The zone boundaries were established based on the existing economic and transportation characteristics, as well as desired uses for the area.

Core Zone

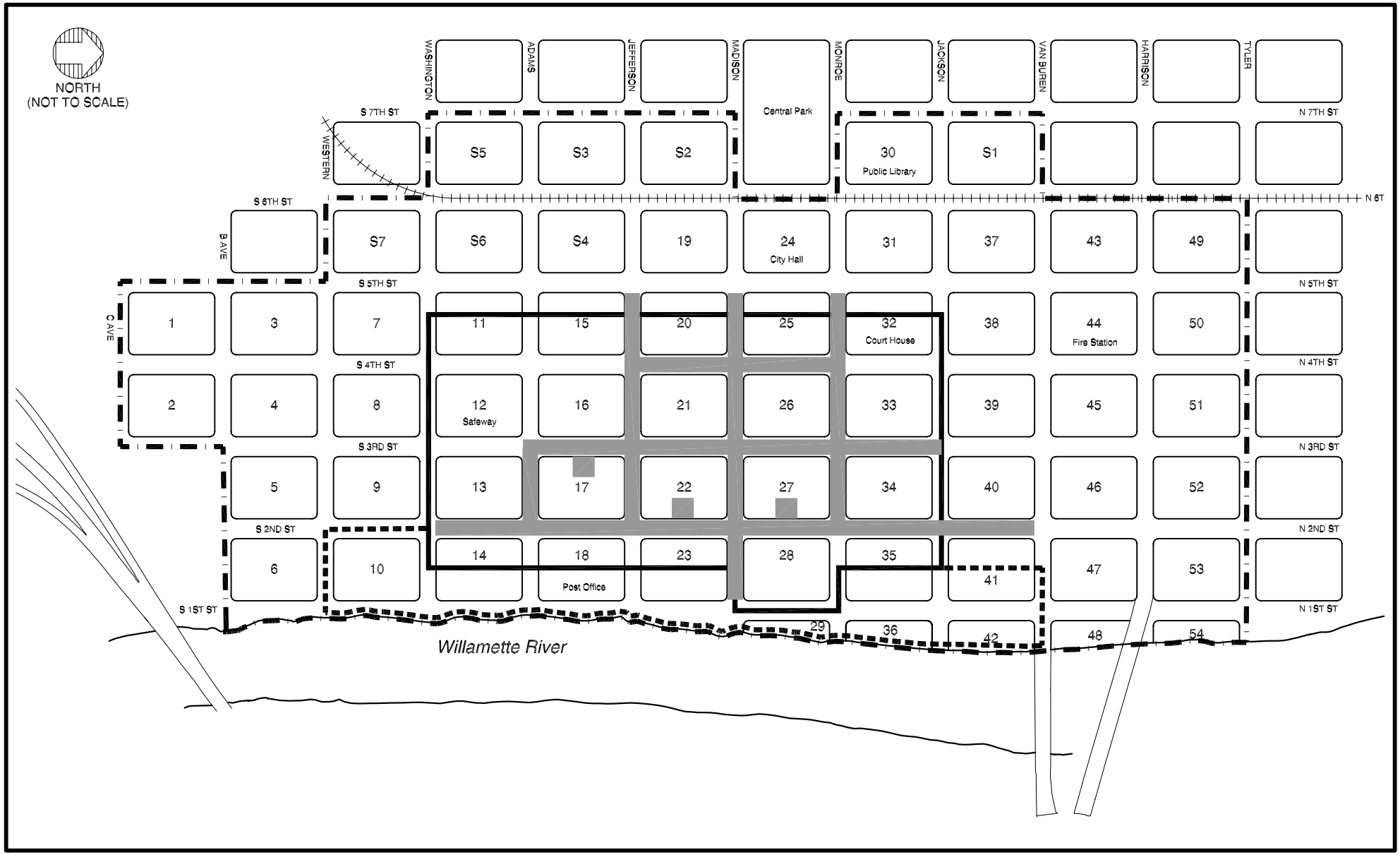
The Core Zone of downtown includes the highest density of development and has a high concentration of retail, restaurant, and entertainment establishments. The existing Free Customer Parking area in Downtown Corvallis is mostly contained within the Core Zone boundaries. *The primary purpose of parking in the Core Zone is to serve customers and other short-term visitor needs.*

Intermediate Zone

The Intermediate Zone includes a mix of development types, but at lower densities than in the core, and with a relatively higher proportion of office and professional services. Expansions of the economic characteristics of the Core Zone would be expected to occur in the Intermediate Zone. *Parking in the Intermediate Zone is intended to serve a balanced mix of long-term and short-term parking needs*. The public parking supply in the Intermediate zone can serve the long-term needs to the extent that adequate short-term parking is provided for the retail and service oriented businesses in this zone. In addition to retail and commercial office space, Corvallis' Intermediate Zone includes several City and County offices and facilities, including the library, City Hall, and the County Jail. The Intermediate Zone also includes some single-family residential areas north and south of the core.

Peripheral Zone

The Peripheral Zone is the area immediately outside of the Intermediate Zone. Parking in the Peripheral Zone is largely unregulated, as it serves a high proportion of residential demand with some low-density commercial uses. If spillover from the Intermediate and Core Zones occurs and becomes problematic, a Residential Parking Zone may be established. This would ensure that adequate parking is available for demand generated within the Peripheral Zone.



LEGEND

- Core Zone
- Intermediate Zone
- Future Core Zone Expansion
- Free Customer Parking
- # Study Area Block ID

PARKING MANAGEMENT ZONES

DOWNTOWN PARKING PLAN CORVALLIS, OREGON SEPTEMBER 2001	FIGURE 3

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OPERATING PRINCIPLES

Operating principles define the purpose and priority for parking in each of the Parking Management Zones. Operating principles complement and reinforce the Guiding Principles established for the downtown.

Core Zone Operating Principles

- The purpose of, and priority for, parking in the Core of downtown is to support and enhance the vitality of the retail core.
- Parking will be provided to ensure convenient, economical, and user-friendly access for customers, clients, residents, and visitors to downtown.
- Parking for short-term users is the priority for on-street and publicly controlled off-street spaces in the Core Zone.
- There will be no unregulated on-street parking in the Core Zone. All on-street parking will be managed as either Free Customer parking, short-term metered parking, or long-term metered parking.

Intermediate Zone Operating Principles:

- On-street and off-street parking in the Intermediate Zone should be regulated and managed to provide a balanced mix of short-term and long-term stay opportunities for visitors, residents, and employees.
- Over time, in commercially zoned areas, on-street parking will be transitioned to serve short-term, visitor parking. Off-street parking will continue to provide a mix of short- and long-term stay opportunities.
- Parking in this zone is intended to be convenient, supportive of business and residential activity, and user-friendly.
- In residentially zoned areas, priority will be given to residential parking needs.

Peripheral Zone Operating Principles

- Parking in the Peripheral Zone is intended to meet demand generated within the zone. Parking in this zone is unregulated. As such, no time stay restrictions are in effect. Future management strategies assumed for this area would be contingent on the parking activity, capacity, and utilization of all other parking zones.
- If parking spillover from the Intermediate and/or Core Zones results in inadequate parking availability for properties within the Peripheral Zone, Residential Permit Zone programs may be desired.
- Residential Permits that allow limited employee parking permits may provide adequate residential parking while not eliminating available capacity for employee parking.

PARKING MANAGEMENT STRATEGIES

Parking management strategies were identified to optimize the use of the existing parking in Downtown Corvallis. The strategies range from recommendations for policy statements in the zoning code to time-stay conversions of specific spaces. The recommendations are organized as follows:

- Policy Recommendations
- Near-Term Management Recommendations
- On-Going Management Recommendations
- Other Parking Issues

POLICY RECOMMENDATIONS

The following policy elements have been included to ensure that the goals of the parking management plan can be achieved by incorporating parking system management into the City's development policy. It is recommended that these policies be adopted into the appropriate City code.

Application of the 85 Percent Full Standard

The *85 percent full* standard, identified in the Guiding Principles as the threshold for decision-making, becomes the unifying monitoring device connecting the various policy elements. Whenever peak hour parking utilization reaches 85 percent, an evaluation of strategies is automatically triggered.

The 85 percent full standard should typically be applied in areas comprising nine to twelve contiguous blocks. Individual parking lots or blocks may have parking utilization levels higher than 85 percent. Within an analysis area the utilization analysis should distinguish between conditions for short-term and long-term parking.

The 85 percent full standard is first and foremost a benchmark that causes an evaluation of the system to occur. One possible consequence could be that no strategies need to be implemented if the utilization level is deemed acceptable. However, the trigger provides a proactive system of review and provides time to implement parking management strategies before overly constrained conditions occur.

Create Parking Manager

A key component of any effective management plan is the designated *point person.* The City should create a Parking Manager designation, which could be an existing staff, to ensure that the parking in downtown is monitored and adopted strategies are appropriately implemented to pro-actively manage parking in Downtown Corvallis.

Adopt Guiding Principles for Parking Management

The Guiding Principles provide a framework for managing parking and decision-making in the downtown over time. Once established, Guiding Principles for Parking Management should be

adopted by the City of Corvallis as a policy element of the parking code to inform future management as well as development of future public facilities. Incorporating them into City policy assures that the intent and purpose for parking management, established through consensus in this study, is carried out over time.

Adopt the Management Zones and Operating Principles

The recommended Parking Management Zones (Figure 1) should be established and adopted and the Operating Principles described above should be used to guide the evaluation and management of day-to-day dynamics of parking activity. Operating principles are established to describe the primary purposes for parking within each parking management zone and to compliment and reinforce the Guiding Principles established for the downtown.

Evaluate Modifications to the Parking Requirements for new Development in the Downtown

Minimum parking requirements in the downtown have contributed to the development of significant private parking supplies. Since private parking supplies are available only to customers, employers, or visitors of specific properties, they do not support the overall downtown. The analysis in Phase 1 of the Parking Study showed that private *accessory* parking tends to be under-utilized, while adjacent public supplies are at capacity or at least better utilized.

In addition to sustaining inefficient parking utilization, minimum parking requirements can be a barrier to new development. Not only do the requirements increase costs of development, but also on historic properties the requirements may render a project infeasible. Parking requirements could be reduced or entirely removed for downtown development. Optional parking requirement modifications that should be considered are listed below.

- Do nothing. Keep requirements and variance procedures as they are.
- Reduce parking requirements, but maintain a minimum. Minimum parking requirements could be modified to reflect the parking demand revealed in Phase 1 of this study.
- Keep requirements as they are, but increase allowable reductions from the existing policy, which permits reductions of up to ten percent. Specifically, a variance or waiver could be permitted for redevelopment of historic properties where construction of surface parking may be infeasible.
- Develop a fee-in-lieu program. Permit developers to opt out of constructing parking if they contribute to a parking fund. The City, or parking administrator, would manage the fund until such time as the City would develop the parking.
- Eliminate parking minimums and include parking as a component of the fees associated with development.
- Eliminate parking requirements without a corresponding fee or waiver requirement.

NEAR-TERM MANAGEMENT RECOMMENDATIONS

The following strategies are recommended to address existing parking issues. These strategies can be initiated in the near term.

Parking Space Management Reassignment

It is recommended that some site-specific changes to the management of on-street parking spaces be evaluated by the City of Corvallis and the Parking Commission. These suggested changes are based on existing parking management policies, existing peak hour utilization analysis and the adopted parking management plan guiding principles. The following identifies the strategies to be evaluated:

- *Management of currently uncontrolled spaces:* Table 2 identifies the locations of 147 currently uncontrolled parking spaces within or near the core boundaries. As the table shows, long-term meters are recommended for the majority of these spaces

- *Conversions of long-term to short-term time stays:* Several parking spaces that currently operate with ten-hour meters or as unregulated spaces should be evaluated for conversion to short-term use, particularly in the Core Zone. Table 2 identifies 93 long-term meter spaces recommended for conversion to short term. These spaces are located within or adjacent to the core in areas with high demand for short-term parking.

- *Conversions of short-term to long-term time stays:* The utilization analysis revealed several locations in the Intermediate Zone with underutilized short-term parking spaces. Many of these spaces are located in areas with high demand for long-term parking. The 52 spaces recommended for conversion from short-term to long-term are identified in Table 2.

The net impact of the recommended changes is minimal, with a net conversion of 50 long-term spaces to short-term use. However, the following benefits would be achieved:

- increased long-term parking availability near civic buildings;

- increased short-term parking spaces in and near high retail areas;

- compliance with Guiding Principle establishing priority for short-term parking in the Core;

- established City role as owner and manager of on-street parking; and,

- increased revenue potential.

The City of Corvallis should make the decision to modify the parking management as shown in Table 2 based on a review of existing parking utilization in the area, the parking management plan guiding principles, and the operating procedures of the Core and Intermediate Zones.

Table 2
Recommended Changes to On-Street Parking Space Control

Street	Bounding Streets	Side of Street	Zone	Peak Utilization	Spaces*	Current Type	Recommended
Adams Ave	3rd to 4th	Both	Core	Moderate to High	8	Uncontrolled	LT Meter
Washington Ave	1st to 2nd	Both	Core	Low	29	Uncontrolled	LT meter
Washington Ave	2nd to 5th	Both	Zone boundary	High	54	Uncontrolled	LT Meter
6th Street	Jefferson to Monroe	East	Intermediate	High	17	Uncontrolled	LT Meter
6th Street	Jackson to Harrison	East	Intermediate	Moderate to High	16	Uncontrolled	LT Meter
Van Buren Ave	2nd to 3rd	South	Intermediate	Low	4	Uncontrolled	LT Meter
1st Street	Jackson to Van Buren	West	Core	High	10	Uncontrolled	LT Meter
1st Street	Adams to Madison	West	Intermediate	High	9	Uncontrolled	ST
3rd Street	Washington to Adams	Both	Core	High	12	LT meter	ST
4th Street	Washington to Adams	East	Core	High	7	LT meter	ST
4th Street	Adams to Jefferson	Both	Core	High	12	LT meter	ST
Monroe Ave	1st to 2nd	Both	Core	Moderate to High	17	LT meter	ST
Jackson Ave	1st to 3rd	South	Core	High	15	LT meter	ST
1st Street	Madison to Jackson	West	Core	High	30	LT meter	ST
Madison Ave	5th to 6th	Both	Intermediate	Low	12	ST meter	LT meter
Monroe Ave	5th to 6th	Both	Intermediate	Low	11	ST meter	LT meter
Jackson Ave	5th to 6th	North	Intermediate	Low	7	ST meter	LT meter
Van Buren Ave	5th to 6th	South	Intermediate	Low	6	ST meter	LT meter
5th Street	Monroe to Jackson	East	Intermediate	Moderate	6	ST meter	LT meter
5th Street	Van Buren to Harrison	West	Intermediate	Low	10	ST meter	LT meter

* Includes planned changes for angled parking and riverfront redevelopment
LT: Long-term; ST: Short term (free or meters)

Initiate Shared Parking Arrangements

The existing and forecast conditions analyses revealed considerable parking capacity in the existing system. However, the majority of available supply is privately owned. As an alternative to developing new parking, shared parking arrangements offer an opportunity to better utilize existing supply. The City and/or designated representative, such as the Downtown Corvallis Association, can take the lead in developing incentives and initiating contacts with existing property owners. Shared parking arrangements could be initiated between two private developments, or between the private owner and the City.

Some options to facilitate shared parking agreements include:

- Facility upgrades (e.g. lighting, striping, pavement, landscaping)
- Leasing arrangements
- Revenue sharing
- Purchase

Shared Parking/Shuttle Program

Parking demand in the City of Corvallis has sharp seasonal and event peaks. Some typically underutilized parking areas will be at capacity during the Christmas season, or during events such as Da Vinci Days, and OSU parents' weekends. Owners may be reluctant to enter into shared parking arrangements for employees if their ability to meet peak demand will be jeopardized. If during peak events, employees were provided shuttle service to satellite parking, private parking owners may consider making their lots available to visitors.

Hotel parking lots are an example of private facilities that could work well with a shared parking/shuttle service arrangement. The hotel lots included in the surveys had relatively low utilization. Arrangements should be considered under which the hotel lots are leased for employee parking, with the provision that on designated weekends, such as OSU graduation and parents' weekends, the hotels would have access to the full supply. A satellite parking/shuttle program would be incorporated to serve employees during these periods.

Implement "Value" Pricing of Parking

The finite character of parking supply makes appropriate pricing essential in effective management. This is particularly true when parking conditions are constrained. Pricing of parking should reflect the relative convenience for users, in light of the priorities established in the Guiding Principles and operating principles for each management zone.

Not all parking spaces are created equal. In a downtown setting, on-street spaces are seen as more convenient than off-street facilities. Proximity to retail and employment centers is another key determinant of parking space value. Based on these premises, the on-street parking in the Core is the most valuable category of public parking supply in downtown Corvallis. The City's policy of

providing much of this premium parking for free use by customers is appropriate to meet the objectives of the downtown.

In addition to establishing the relative value of specific parking locations, the parking fees should facilitate a generally consistent experience for users. Table 3 outlines the recently updated pricing schedule for public parking in Downtown Corvallis. Daily and monthly equivalent rates are provided for the purpose of comparison.

Table 3
Current Parking Charges

Type	Hourly Equivalent	Daily Equivalent	Monthly Equivalent
Parking Meters			
24 minute meter	$0.63	$6.30	n/a
1-hour meter	$0.50	$5.00	n/a
2-hour meter	$0.38	$3.80	n/a
10-hour meter	$0.10	$1.00	$22
Permit Lots			
Yellow Permit (City Hall)	n/a	$1.15	$25
Red Permit (Fire Station)	n/a	$0.90	$20
Blue Permit (1st Street)	n/a	$0.40	$7

Note: Daily rates correspond to 10 hours; monthly rates correspond to 22 days

Daily equivalent rates are provided as a basis for comparison, and are not intended to indicate appropriate use of short-term metered spaces.

As Table 3 shows, the parking fees for metered spaces decrease as the length of stay increases. Also, employee parking at on-street meters is comparable in price to the permit lots at City Hall and the Fire Station. In some locations, the on-street commuter spaces are located near areas of high retail parking demand. In theory, such on-street spaces charged at $0.10 per hour (for employees) could be valued at $0.38 per hour by customers, the priority user for the on-street system. As such, some of the 10-hour meters may be under-priced.

The Yellow Permit spaces adjacent to City Hall may also be under-priced, given the long-waiting list. Recent query revealed that the next person on the waiting list for a Yellow Permit has been on the list since 1992. Clearly, this lot is considered premium among some downtown employees.

For the reasons outlined above, the fees for long-term on-street metered parking and for the Yellow Permit lot should be increased to provide employees incentives to use the currently underutilized Blue Permit lot and free lots south of Western. Modifications to short-term rates are not recommended at this time, but when such modifications are next considered, the hourly equivalent rates should be modified to provide a more consistent hourly equivalent charge for stays less than four hours. For instance, the two-hour meter fees could be raised to $0.50 per hour, and the 24-minute meter could be reduced to $0.20. This would achieve a consistent $0.50 per hour rate for short-term stays. A supporting public education process should be implemented to explain the rationale for this particular action and to provide advice regarding the location of available off-street parking.

ON-GOING MANAGEMENT RECOMMENDATIONS

The recommendations identified in this section should be implemented and revisited on an on-going basis by City of Corvallis Staff or the parking manager. These recommendations are designed to accommodate changes in development patterns and resulting changes in parking needs in Downtown Corvallis. First, strategies for area-wide implementation are identified, followed by strategies targeted for each Management Zone.

Area-Wide Recommendations

- Continue to pursue shared parking arrangements with owners of private parking.
- Conduct regular utilization studies to assess parking conditions and perceptions. Every 12 to 18 months, conduct an informal assessment of parking conditions, which could include some or all of the following elements:
- Peak hour utilization study using an aerial photo. The system peak hour of noon to 1 p.m. should be studied. In addition, the mid-day peak between 2 and 3 p.m. could be studied to evaluate employee-parking conditions.
- A brief survey of property owners and or customers/visitors could be conducted to gauge user satisfaction or frustration.
- Every five years, conduct duration/turnover analysis in targeted areas to assess the effectiveness of enforcement and to identify shifts in demand characteristics of parking system-users.
- Apply these findings to test if there is any need to adjust parking policies or management techniques (e.g. short-term and long-term meters, management zone boundaries).

Core Zone Management Strategies

- Maintain Free Customer Parking in the core zone.
    - On-street Free Customer Parking should be managed to accommodate parking duration of up to two hours.
    - Off-street Free Customer Parking should be managed to accommodate parking duration of up to four hours.
- Long-term metered parking can be provided in the core only to the extent that adjacent short-term parking is below 85% full during the peak hour.
- The long-range plan for off-street parking in the core is to accommodate parking durations of no more than four hours.
- Conduct regular utilization analyses to reflect the retail peak (noon to 1 p.m.) and the employment peak (10 to 11 a.m. or 2 and 3 p.m.). Utilization studies should be conducted at intervals of no more than three years, or more frequently as changing conditions or specific concerns may dictate. Aerial photography or manual field counts could be used to conduct the analysis. Manual field counts will likely be more appropriate for specific study

areas, whereas the aerial photography would be more efficient to evaluate the entire downtown.

If monitoring reveals parking utilization of 85% or higher, conduct a duration analysis to determine if time stays in public short-term parking areas are consistent with desired uses. Specifically, on-street short-term parking should not exceed two hours and off-street parking duration should not exceed four hours. If the duration analysis reveals that time stays are too long, the first priority will be to decrease time stays. Though each measure should be considered, it is likely they would not all be implemented.

Measures to decrease time stays

- Increase the level of enforcement.

- Sign the off-street Free Customer Parking for four-hour maximum stays (currently the Free Customer Parking lots are not signed with any time limit).

- Convert some signed time limits to metered time limits.

- Sign the on-street Free Customer Parking for two-hour maximum stays.

Measures affecting short-term parking availability in the Core Zone

- Transition employee parking in the Core Zone to the Intermediate Zone.

- Expand the boundaries of the Core Management Zone and where appropriate, modify parking supply to increase the number of on-street visitor spaces.

- Continue to pursue shared-use agreements with private lots to provide for additional short-term parking in the Core Zone.

- Implement or increase parking fees.

- Create new public supply in the Core Zone.

Intermediate Zone Management Strategies

- On-street parking will be an appropriate mix of short-term and long-term stays based on the belief that:

    - current utilization in the Intermediate Zone provides flexibility to provide time stays conducive to employees and longer term visitor parking for the downtown as well as short-term parking; and,

    - the current economic uses in the Intermediate Zone do not as yet require the type of turnover ratios necessary in the Core Zone.

- If in the future, hourly pricing is implemented for off-street facilities in the Intermediate Zone, the hourly rate for parking for the first four hours of parking will be the same as that

in effect for the on-street parking system for short-term use. Longer-term rates are intended to be less than those charged for long-term parking in the Core Zone to facilitate and attract longer-term users, especially during peak weekday use periods.

- If monitoring reveals parking utilization of 85% or higher, conduct a duration analysis to determine if time stays of short-term public parking spaces are consistent with desired uses (see Core Zone Management Strategies). If the duration analysis reveals that time stays are too long, the first priority will be to decrease time stays.

All of the following measures should be considered though it is likely they would not all be implemented

Measures affecting time stays

- Increase the level of enforcement
- Increase the number of metered short-term parking spaces to create greater efficiency in actual rate of turnover.
- Increase parking fees for long-term parking.

Measures affecting short-term parking availability in the Intermediate Zone

- Transition employee parking in the Core Zone to the Intermediate Zone.
- Transition employee on-street parking in the Intermediate Zone into off-street locations within the zone.
- Transition off-street employee parking into another parking zone.
- Transition the overall mix of unrestricted spaces to a higher percentage of customer accessible stalls.
- Pursue additional shared parking arrangements.
- Implement or increase parking fees.
- Create new off-street supply.

Measures affecting long-term parking availability in the Intermediate Zone

- Where practicable, expand the boundaries of the Intermediate Zone to increase the number of on-street long-term spaces. Parking conditions in the Peripheral Zone would need to be evaluated to ensure that access for current users, especially residential, is protected.
- Continue to pursue shared parking arrangements with private parking owners to increase accessible parking supplies for long-term use.

- Increase measures to encourage non-automobile access to downtown for commuters, including programs such as shuttles, satellite parking, ridesharing, parking cash-out and transit subsidies.

- Implement or increase parking fees.

- Create new off-street supply.

Peripheral Zone Management Strategy

Parking in the Peripheral Zone is unregulated. As such, no time stays are in effect. Future management strategies to be implemented in this area would be contingent on the parking activity, capacity, and utilization of all other parking zones.

As stated in the Operating Principles, Residential Permit Zone programs may be desired if parking spillover from the Intermediate and/or Core Zone(s) results in inadequate parking availability for properties within the Peripheral Zone.

CONSIDERATIONS FOR DEVELOPING NEW PUBLIC PARKING

New public parking development is not recommended at this time and the analysis conducted in Phase 1 of the parking study indicated that adequate capacity is available to meet the ten-year development requirements. Therefore, this Downtown Corvallis Parking Management Plan emphasizes improved utilization of existing supplies through increased management of public parking and shared use agreements with private parking facilities. However, additional off-street supply may be appropriate in the long-range as development densities increase and as private parking lots reach the 85 percent full trigger conditions. This section outlines the key issues to consider in planning for, considering and/or developing public parking facilities.

Primary User Group

The intended primary user group that will be served by new parking should be established at the outset of new facility planning. Basically, the facility should be planned to serve customers, employees, or a combination thereof. The determination should largely be made based on the existing demand by user type and the overall strategy implementation to achieve the downtown goals. It is often appropriate to make a parking facility available for all users on an interim basis, and transition toward the primary user group as demand requires.

Walking Distances

Walking distance is another key determinant in site selection. The survey conducted in Phase 1 of the parking study asked each user group the maximum distance they would be willing to walk to parking. Table 4 summarizes the responses in terms of the percent of respondents who would be accommodated by a parking facility at various distances.

Table 4
Parking Location and Accommodation

Walking Distance to Destination	Shoppers/Visitors Accommodated	Percent Employees Accommodated
> 6 blocks	16%	18%
5 to 6 blocks	40%	42%
3 to 4 blocks	77%	80%
1 to 2 blocks	100%	100%

Table 4 shows that all survey respondents would be adequately accommodated if parking were located one to two blocks from their destination. However, if parking were moved to a distance of three to four blocks, only 77 percent would be accommodated. The findings are similar for employees. This is generally consistent with industry standards, which suggest that walking distances for customers should be around 750 feet. Typically, longer walking distances are considered acceptable for employees (1,000 to 1,200 feet).

Lot Dimensions

The maximum number of parking stalls per square foot could be achieved if a full block site were developed for parking. However, this would be out of scale with other general development patterns in downtown. General lot dimensions and shape can greatly impact the efficiency of a site. A minimum desirable lot for structured parking would have dimensions of approximately 100 x 200 feet, or approximately a half city block.

Urban Design

Public parking should only be considered to support the desired economic activities in downtown. Therefore, design of a parking facility should be consistent with the character (e.g. design, height, building materials, access, ground floor activities) of Downtown Corvallis. Ground floor retail is required in many urban locations in order to support development goals and maintain an environment conducive to street-level activity.

Development Restrictions

In addition to the urban design of a parking structure, many downtowns have height restrictions for new buildings. Height restrictions in combination with other design or development guidelines may limit the number of parking spaces that can be developed on a particular site. Such development code restrictions can make some locations impractical for parking structure development. According to City staff, Corvallis currently allows new buildings in downtown to be up to 75 feet in height.

Vehicle Access

Each potential site should also be evaluated to ensure that adequate and efficient vehicle access can be achieved. Some jurisdictions have access restrictions on downtown streets. Also, the Oregon Department of Transportation would have to be consulted for access onto 3rd or 4th Streets.

Revenue Requirements and Funding Sources

Typically, surface parking lots cost on the order of $2,000 to $5,000 per stall, whereas structured parking can range from $10,000 per stall for the simplest design, to more than $20,000. A parking structure at the $10,000 per stall level would have to generate revenues of $80 to $100 per month per stall to be self-sustaining. Given existing and forecast utilization conditions, and the low parking fees that are the norm in Downtown Corvallis, additional sources of revenue would be required to construct a facility. Funding options to consider include Local Improvement Districts or Parking Districts, Fee in-lieu-of Parking funds, or City of Corvallis general funds. In addition, public/private agreements could be achieved that would help defray costs of construction, in exchange for development incentives such as higher FAR allowances or additional accessory parking.

PRELIMINARY SITE EVALUATION

This section provides a preliminary assessment of downtown sites for potential future off-street parking (in structures or surface lots). The evaluation focused on properties already controlled by the City of Corvallis or previously identified for potential acquisition. Select sites have been evaluated for both short-term (customer) and long-term (employee) parking. All sites have been identified according to the Block ID (see again Figure 3) number used throughout the development of the parking plan.

As additional surface lots are developed or acquired by the City, these should be designated as "interim" parking lots. The "interim" designation ensures that the land could be redeveloped in the future to a higher and better use. In the long-range planning horizon, structured parking is often preferable as it makes downtown land available for uses other than parking as urban densities increase. Also, when appropriately designed, parking structures can be more visually pleasing that surface lots in downtown areas.

Customer Parking, Expansion of Existing Public Lot on Block 27

As an interim measure, expanding existing public lots could provide additional surface parking for customers. The property directly north of the Free Customer Parking lot was identified by the City for potential acquisition in 1996. Currently, a commercial structure is located on the site, which may preclude parking site construction. If this property could be acquired, it would increase the overall square footage with site dimensions conducive to efficient parking facility layout.

Customer Parking (Interim), Lease Arrangement on Block 28

Lots on the northeast and southeast corners of this block should be considered for potential interim surface parking for customers. The sites are centrally located and are currently undeveloped. A leasing arrangement would provide near-term use until a structure is needed for customers parking in downtown, and would allow property owners to retain the opportunity for future development.

Long-Range Customer Parking, Parking Structure on Block 22 or Block 27

Both of the current Free Customer Parking lots accessed via 2nd Street would be suitable for future parking structure development. The lot dimensions meet minimum standards for efficiency and the sites are centrally located for customer uses.

Employee Parking (Interim), Surface Parking on Block 19

The northeast lot on Block 19 has been acquired by the City of Corvallis. Final plans have not been determined for its development. This site could be developed as an interim employee surface lot until it is ready to be developed for other uses.

Long-Range Employee Parking, Parking Structure on Block 44

The south half of Block 44 is currently used as a joint surface lot for the fire station and for public long-term parking. Benefits of developing a structure at this site include the relatively large site dimensions and the fact that the City already owns the property. The site is also well located in the Intermediate Zone to serve employee parking.

Long-Range Employee Parking, Parking Structure on Block 24

Block 24 is the site of the City Hall building and is entirely owned by the City. Public parking is already provided on the northern half of the block. The site is located in the intermediate zone, and is convenient to City and County offices and services. More than half of the block area is currently used for parking, so that there is potential for adequate site dimensions for a structure.

In general, acquisition of additional surface lots is recommended to occur on an interim basis through leasing of private lots and/or expansion of existing public lots. Should the need arise, existing city properties offer good opportunities for future structures for either customers or employees.

SAMPLE APPLICATION OF THE PARKING MANAGEMENT PLAN

The *Downtown Corvallis Parking Management Plan* provides a dynamic framework for parking management. The established priorities, principles, and trigger thresholds create a management plan that is responsive to changes in parking conditions, as determined through on-going monitoring of parking conditions. The purpose of this section is to illustrate the process for implementing the parking management plan.

The parking management zones shown in Figure 3 include a Future Core Expansion area along the Riverfront. The recommended expansion of the Core Zone is based on two fundamental elements of the parking management plan. First, the parking conditions in the existing Core are sufficiently constrained to require that some action be taken to meet the 85 percent full threshold. Second, the Riverfront has been undergoing considerable redevelopment and more is anticipated. As the urban character of the Riverfront changes, the priorities and management principles for parking will need to change to support the desired activities in the area.

UTILIZATION THRESHOLDS

The utilization study conducted in Spring 2000 revealed that nearly all on-street parking areas in the Core zone are at 85 percent or higher utilization during the peak hour. Most of the parking in the Core is designated for customer use. However, there are several long-term spaces, including ten-hour meters on 3rd and 4th Streets near Adams Avenue, and uncontrolled spaces on Washington Avenue. These were also highly utilized.

DURATION ANALYSIS

The duration analysis conducted at that time indicated that short-term parking is being used as intended, typically with parking stays of two hours or less in short-term parking spaces. Therefore, measures to reduce time stays for short-term users would not be effective in supporting the goals for the area. However, several measures identified in the Core Zone Management Strategies section would effectively support the objectives for the area.

MANAGEMENT STRATEGIES

Convert employee parking in the Core Zone to the Intermediate Zone.

This would be achieved through the Parking Space Management Reassignment recommendations in the plan (see Table 2).

Expand the boundaries of the Core Management Zone and modify as appropriate the parking supply to increase the number of on-street visitor spaces.

Expanding the Core Zone as shown by the Future Core Expansion boundaries in Figure 3 would change the priorities for parking in the Riverfront based on the corresponding Core Zone Operating Principles. The priority for on-street parking along 1st Street and adjacent east/west block faces would transition to short-term use, from the current uncontrolled or 10-hour metered uses. Implementing this strategy would have the advantage of providing more short-term parking in the

area.

Continue to pursue shared-use agreements with private lots to provide for additional short-term parking in the Core Zone.

Leasing arrangements to provided interim surface parking for customers could be sought, as described in the Site Evaluation section of this study. Other privately owned sites with existing low-utilization may also be appropriate. This would optimize the use of existing parking spaces and limit the need to construct new parking supply.

Implement or increase parking fees.

No increases in parking fees are recommended at this time for two reasons. First, the set of recommended strategies should be implemented and the impacts should be determined prior to taking further restrictive actions. Second, parking fee increases have recently been implemented in the downtown. New or increased parking fees should be considered again when the 85 percent full trigger condition is reached.

Create new public supply in the Core Zone.

Leasing arrangements, as identified for shared parking, are recommended for additional public supply in the Core zone. Construction of new public facilities is not recommended at this time.

CONCLUSION

This parking management plan builds upon guiding principles and operating principles that were based on the fundamental values and objectives for Downtown Corvallis. The parking management strategies were identified to optimize the use of the existing parking in Downtown Corvallis. The strategies include policy recommendations, near-term management recommendations, and on-going management recommendations. The success of the plan depends upon its adoption, including the guiding principles and operating principles. Adoption of the plan will be essential to implementation.

Implementation of the parking management plan provides definition of the intended use and purpose of the parking system; manages the supply and enforces the parking policies; monitors the use and responds to changes in demand; and, maintains the intended function of the overall system. It is also intended to promote sustainable economic vitality through providing free parking for customers and visitors to Downtown, while also supporting the mode split targets.

The evaluation of non-auto travel modes has been included in the parking management plan in recognition of the close relationship between the overall transportation system and the ways that parking can be used and managed. On-going improvements to the pedestrian, bicycle, and transit systems have been identified and evaluated to support the City's multi-modal transportation goals. In order to fully realize the desired impacts of these improvements, management of the parking system should be integrated with the multi-modal transportation system to achieve the goals of the community.